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extended attributes

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by Bill Schindler, editor-in-chief

We're doing something a little different in this issue. Because so many people expressed strong interest in what Mike Lawrie had to say, we're printing the transcript of the entire meeting.

In order to squeeze the entire transcript into one issue, we had to add more than one "continued on" - something that we normally try very hard not to do.

Also, two of our columnists take two different viewpoints on Workspace On Demand. In two warped, David looks at the technical implications and possibilities; in on the bitstream, Esther considers IBM's marketing of WSOD. (I would be very interested in hearing whether you or your company have any plans for WSOD. And if IBM's pricing is going to be a barrier to those plans. Drop me an email at editor@ possi.org.)

Warpstock

Our next issue will cover one of the most exciting things to happen to OS/2 in a while: Warpstock.

The team of volunteers who have worked on organizing Warpstock have done a tremendous professional job. Setup, communications, registration, and everything leading up to the event has been very smooth from my viewpoint as an attendee, a presenter, and a vendor.

One of the best things about Warpstock is the amount of positive energy and hope it has engendered in the OS/2 community. There's already talk (I'm writing this before the event) about where next year's Warpstock will be held and even a European Warpstock.

Please be sure to send a card or an email to folks on the Warpstock committee and say thank you for all the hard work and energy they put into the event!

Speaking of thank yous...

I'm long overdue in expressing my gratitude to a group of hard working volunteers here in the Society: our SIG leaders.

Besides the obvious time they put in at the SIG meetings, these guys spend time every month behind the scenes trying to dream up meetings that you will find interesting. They work at finding local vendors who might be willing to present to a small group. And last (though definitely not least from my viewpoint) they put time and effort into writing their monthly SIG articles.

Please take a moment of your time to say thanks to Elliot Abramowitz, Mike Briggs, Stan Kropen, Robert Rosenwald, and Lyle Wilson.

Oh, and go to a SIG meeting if you can. You may find that they're often more informative (and fun!) than the general meetings!

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on the bitstream WorkSpace, No Demand

by Esther Schindler

On paper, IBM's WorkSpace On Demand (WSOD) sounds like a worthy product. It answers several of the concerns of the Information Services (IS) management at the large companies to whom IBM is most devoted, and it uses existing technology (that is, mostlydebugged technology) in creative ways.

If you've missed the technical description of the software, here's a summary. Networked users, using OS/2 Warp Server, load the operating system and all their applications across the network. The client can be a stand-alone PC or a network computer, whose behavior is administered at the server. The local workstation runs Netscape (or a similar product) as its shell, along with the OS/2, DOS, and Windows 3.x applications to which the network administrator has given access. If the company installs a Citrix server, the users can also employ Windows 95 and Windows NT applications. Underneath, WSOD is OS/2. It will still run OS/2 Workplace Shell applications. But workstation management is infinitely easier.

Despite WSOD's technical strengths, however, I believe that the product may be doomed to failure. Some people may consider this enumeration of WSOD's weaknesses to be "not supporting OS/2 when it most needs it," but ignoring problems won't solve them. Only by addressing the issues I raise below can IBM minimize its risk.

Unfortunately, I think it's unlikely that IBM will do so.

To beat the bandwidth

WSOD's major technological challenge is that the workstations will boot their operating systems across the network. (In olden times, this was called RIPL for Remote IPL or Remote Initial Program Load.) It's unclear to me if these challenges are being adequately addressed. I'm not an expert on such matters, which makes it difficult to ask pointed questions.

However, I've spoken with two corporate IS representatives, each responsible for the care and feeding of their company's network connections. Both network administrators (in environments with thousands of workstations) scoffed openly at the idea of their networks' ability to handle that sort of traffic. Network bandwidth is already their biggest problem, and that's with users running applications locally, storing only data on the company's servers. Even if users leave the computer turned on all the time and employ Java applications, the code has to get transferred across the wires somehow.

But let's assume that IBM finds some way to address these technical issues. Let's say they find a way to minimize the impact on network usage; after all, IBM has always been good at solving technical challenges. WSOD may still be doomed for nontechnical reasons.

The home/office dichotomy

As members of the Phoenix OS/2 Society know personally, IBM has never understood the relationship between what a computer user "plays with" at home and how she uses her computer at the office. I have met very few IBM executives who understand what a "power user" is; I could count those individuals on the fingers of one hand. To the rest of IBM management, power users (such as the people who belong to the Society) are "hobbyists," not the technically savvy enthusiasts who invest time at home to explore technology ... and then make recommendations at work, formally or otherwise.

The reason that WSOD appeals to company management is that it's a way to return to The Good Old Days when Information Services controlled how employees used (mainframe) computers, to what resources they had access, and which applications were approved. To a marked degree, WSOD is a return to the days of an intelligent terminal—one that happens to be able to run existing PC applications. The magic word "control" is what Information Services departments long to hear, as they lost it many years ago. It began on the first day someone dragged his Apple][into the office so he could use VisiCalc.

Isn't that iron fisted control the reason we rebelled against IS departments in the first place? Do you think that computer users, especially the technically savvy users who love to play with this stuff at home and attend user group meetings, will recommend a return to The Way It Used To Be? Even if it's the right answer, is it possible to put that particular genie back in the bottle?

If IBM tries to sell WSOD to large companies, what will those power users recommend their companies do? Most home users are apt to be using some flavor of Windows. How likely is that technically savvy advisor to say, "Hey, that WSOD sounds cool"? Not very. But, because the power user is invisible to them, IBM won't do anything to address the issue.

It goes farther than this. In large companies (where WSOD is most compelling to IS departments), the PC on an employee's desk has become a personal domain. A cubicle provides little privacy and less opportunity for individual expression (though I've seen cubes papered wall-to-wall with photos, toy collections, and cartoons), so users invest their creativity in their computers. I've seen a stunning number of fancy screen savers, background settings, and personally-chosen utilities. WSOD promises to kill this personal space (from the user's point of view) or uncontrolled behavior (from IS' perspective). But the IS department lost this struggle years ago; what makes IBM think that the IS department has the ability to wrest it back?

Friends On Demand?

That's only the tip of the iceberg. IBM doesn't know how to "win friends and influence people"—at least, not unless the "people" is a top company executive with plush carpeting and a corner office. In try-

Esther Schindler is program chair of the Phoenix OS/2 Society. She teaches OS/2 to corporate users and writes about OS/2 products for the national computing magazines.

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ing to sell WSOD, IBM has once again neglected the people whom it most needs as partners.

For instance, IBM has had little or no interaction with OS/2 software developers, even though an OS/2 application on WSOD may need "just a few changes" to ensure that it works in the new environment. Before rolling out a major product release, Microsoft would be running free training classes in cities around the world, demonstrating promises (if not technology) to developers. I haven't heard a peep from IBM.

Nor has IBM done anything to encourage an aftermarket of books or training courses. If you want WSOD training, go to IBM. If you want a book about WSOD, order your Red Book from IBM now. You certainly won't see new titles from any of the major book publishers, who are all convinced that OS/2 books won't sell. (And calling it WSOD only makes IBM look deceitful, since "everybody knows" it's OS/2 underneath. That is, if the publisher has heard of WSOD at all; most haven't.) The only encouragement for consultants to sell and install WSOD is through BESTeam, a choir which is used to IBM's preaching, but reaches few companies outside the (already) faithful.

How is this better than our current situation with OS/2? How is it even different? It's as if IBM imagines that by changing the color of the paint, they no longer have to address the problems underneath. They point at the new color and exclaim, "It's all different now!" The problems are at the foundation; paint doesn't help. They're solving the wrong problem, and they don't even see that they're doing so.

What are they selling?

We OS/2 users want to believe in the future of our operating system so badly that we're often willing to fool ourselves, like a wife who explains away lipstick on her husband's collar. Yet the lipstick remains.

If you listen carefully to the WSOD sales pitch (as many of us did at last month's meeting with Mike Lawrie), you'll hear that IBM wants to "transition" existing OS/2 customers to WSOD. There's no mention of marketing it to Windows' shops; presumably, IBM will continue to explain to those customers how well IBM can support their Windows NT networks. I see no evidence that IBM wants to take WSOD to the mainstream in corporate computing. Instead, WSOD is an alternate exit for companies that are OS/2 shops that are nervous about the operating system's future.

Without mainstreaming, how do you expect a Windows application vendor to respond to a technical support call that begins, "I was running your program in WSOD with Citrix Windows 95 support, and..."? Do you imagine that you'll get a more enthusiastic response than when you said, "I was using your program in WinOS2..."?

In other words, IBM continues to compete with itself by promoting WSOD alongside Windows NT. Which product do you think is most likely to win?

The corporate people aren't listening to the WSOD message, particularly. Nor are OS/2 software vendors. While they may be kicking the tires on Java and network computing (both of which are suitable as solutions for some computing problems, though not all), most large corporations are moving to Windows NT as quickly as they can. ("As quickly as they can" means years, for most of these companies. But the new systems being installed get Windows NT, not a flavor of OS/2.)

Buy it; we didn't do it

IBM's network computing strategy, of which WSOD is a component, is dependent primarily on Java, a standard they don't own. When I've asked IBM executives why anyone should follow the company down yet another path (after the failed promises for the technically impressive SOM, OpenDoc, and Taligent), IBM's answer is always that Java technology is something "everyone" is behind. In other words, OS/2 users and customers should follow IBM's lead on Java (and thus WSOD) because it isn't from IBM. Let me get this straight. I should follow you because you aren't the innovator? I should believe in you precisely because you aren't responsible for this? Somehow, the logic escapes me.

It's not that WSOD is likely to be a bad product, or that it will fail in its stated technical goals. I think it's a superb technical solution for the certain class of user for whom IBM has designed it-and for the small and medium businesses for whom IBM has not designed it, and is (as usual) neglecting as a market. Small and medium-sized businesses have at least an equal concern with employees messing around with configuration files and bringing in virii from home; plus, small companies have less time to fuss with computers and no dedicated staff to do so. WSOD might be a perfect solution for them... but IBM isn't addressing the small and medium business market with this product. Even if they intended to do so, the price is set too high for most small businesses to afford-certainly not for a product that isn't mainstream.

Nor is IBM courting the Value Added Resellers or software developers who might be able to sell WSOD to small and medium businesses as a turnkey solution. IBM is talking up WSOD only to its big corporate clients and to the publications most likely to reach them, such as *Computerworld* and *PC Week*. (When the IBM WSOD press tour came around, they couldn't be bothered to stop off in Phoenix to show it to me, much less to the editors of a major software development magazine.)

Keep in mind that nobody ever claimed that OS/2 is other than a technically superior operating system. I heard a corporate user remark, this week, "Just because OS/2's technology is better doesn't mean that it's going to win." IBM's technology may be superior with WSOD, but technology was never the problem. The faults were never with the operating system, but with the company (allegedly) marketing it.

The weaknesses are in the process, in the people-implementation, and in the product positioning. IBM is trying to build a whole new product line without addressing any of the mistakes they made with OS/2. How can we expect that they will have a different result?

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two warped architecture

by David Both

Because Judy is very busy this month helping to finish the preparations for Warpstock '97, she asked me to fill in for her. I have agreed to do so, but I'm sure you are wondering why I am not equally busy with Warpstock.

A new job

As most of you know, I have been running my own consulting business since I left IBM more than two years ago. In mid-September, a friend who works for a large telecommunications company called me to ask if I knew anyone who had excellent OS/2 and network skills, and who could take over management of a large OS/2 network. To make a long story short, they made me an offer I could not refuse. As I write this in early October, I will start work at this company tomorrow

This new job must take precedence over my volunteer activities at Warpstock. I am not even sure if I will be able to attend Warpstock. If that turns out to be the case, I will have missed an incredible opportunity to meet some of you face to face for the first time, and to talk with you about OS/2, our favorite operating system.

Last month I said I would talk about how WorkSpace On Demand (WSOD) will transform the computing world as we know it. To understand how this will happen, it is necessary to understand a little of the architecture of WSOD.

Transforming the clientserver relationship

Only two conceptual changes are required to transform client server systems into components for a network computing based infrastructure. The first change is in letting the server provide the operating system, applications, and configuration information for all its clients, rather than relying on local hard drives. The second change is to the client, heretofore perceived as an indivisible combination of hardware and end user. This new view separates the client (as machine) from the cli-

ent (as the person using the machine) into two separate entities. It is also in the realization that each of these two client entities functions differently.

The major benefits of WSOD originate from these two transforming conceptual changes. The first change of concept enables the centralized management of WSOD clients. All client code is maintained on the server just as it would be kept on the boot drive in a desktop system. All necessary updates to operating system, application, or device driver programs are made once for all clients on the network, by changing it on the server. The code and data the client needs is downloaded from the server as it needed. Down- The Client system software installaloading code from the server ensures that the client is always using the most recent updates.

The truly mobile user

The second transformation is the basis for a truly mobile client user. When the client is viewed only as the hardware, the client becomes a stationary element in the system, rather than a virtual desktop that can be accessed from anywhere in the network. In this new environment, a user can log onto any machine in the network, whether across the hall or halfway around the world, and have access to the desktop layout and applications as specified in his or her personal profile.

The personal profile is tied to the user's network logon, just as previous types of logon assignments have been. Now, in addition to printer, file, and directory logon assignments, the user's personal preferences for desktop layout and configuration are also served as logon assignments.

WSOD architecture

WSOD consists of two components. WSOD is the client side component; the operating system and software that runs on the network computer. The second component is WorkSpace on Demand Manager, which is the set of server utilities

used to install, configure, and maintain the network client hardware and software. A server with the WSOD Manager code is referred to as the WorkSpace on Demand Server. The server may also have other functions enabled, including normal file and print functions, database functions provided by DB2 or other databases, and Lotus Domino type workgroup functions.

The server functions can be categorized into three areas:

- O Client system software installation and configuration
- O Remote boot service
- O Roaming application access

Client system software

tion and configuration functions are the tools for managing the client. These include graphical programs that install new applications, define new users, and fine tune client system elements such as video resolution.

System administrators can access these utilities either from the server or from a workstation set up as an "Admin Client." This server-centered design enables administrators to sit at any connected workstation to manage any of the clients in the network. The system is designed so that administration is done from either an OS/2 Warp client or OS/2 Warp Server workstation.

Remote boot service

The Remote boot service of OS/2 Warp Server manages the hardware initialization process. Client machines are configured to request service from the network when they are powered on. The Network Interface Card (NIC) in the client must support RIPL and must be specifically supported by Work-Space on Demand.

The server responds to the client request for boot by sending the operating system and configuration information to the requester. The server also determines and downloads the appropriate device drivers to properly initialize that particular system. When the boot sequence is

complete, the client's video screen displays a network logon panel.

When the user enters a userid and password, the information is authenticated with a profile maintained on the server. The server checks the Domain Control Database (DCDB) to determine what applications are assigned to populate the user's desktop.

The WSOD technology based client supports and can run a number of application types (Java, OS/2, DOS, or Windows 3.x), all from a simplified server-managed desktop. A WSOD client can also run Win 32 applications when it is configured with the Citrix Windows 3.1 client. It can also be used for 3270 or 5250 terminal emulation to connect with mainframe or midrange systems.

WorkSpace on Demand desktop

One unique aspect of the WSOD client is its ability to be defined with a number of different desktops. The system is architected so that an administrator can configure the cli-

ent interface to be the Netscape browser or a customer defined application, such as Lotus Notes. The default network user interface (NUI) consists of icons defined from the server that cannot be altered by the end user.

Take it to the Max

Now let's take this whole concept and move it from the enterprise to the Internet. Imagine a new class of ISP which provides not only access to the Internet, but also access to programs.

The new ISPs will provide very inexpensive computers for individuals and small to medium businesses who don't have the time or staff to deal with installing, updating, troubleshooting, or fussing with personal computers and their networks. There will be no operating system or new ISPs might be. software on those computers. When booted, they connect to the ISP and load the operating system—OS/2 of course-and then the applications chosen by the user of this new service.

Call it Office On Demand. A small business owner will no longer have to worry about anything related to the computer. Turn it on and do the payroll, receivables, billing, word processing, e-mail, or any of the many other things a small business person must do to run her business.

Take your office home or on a business trip. You no longer have to haul a laptop (convenient as they are); just use the hotel's computer to connect to your ISP-which supplied the computers to the hotel, of course, at a very inexpensive rateand get the same Workspace, the same applications, and all of your own customization, all loaded from vour ISP.

In my next column, in two months, I will talk about who these



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From the horse's mouth: Mike Lawrie on OS/2

by Joel Frey

keaturi

There was a flurry of discussion on the Phoenix OS/2 Society listserver after the September general meeting. Several members, who couldn't attend the meeting, wanted to know what Mike Lawrie, the head of IBM PSP, had to say. They asked for a summary, but I was trying to get ready for a vacation that had already been postponed by work.

Just call me Richard Nixon. I have it all on tape, but without any (large) gaps, albeit at a fidelity that would make Thomas Edison cringe.

The meeting consisted of a presentation concerning IBM's OS/2 plans, followed by a Q&A session. As Mr. Lawrie said, some members of the audience may not like what he had to say, but at least we were getting it "straight from the horse's mouth." Like everyone who attended the meeting, I have my own interpretation of what was said, but I'm fighting the urge to put it in this column. My purpose here is to report. My intent is to repeat what Mike Lawrie had to say verbatim, at least to the extent that space and the quality of the recording allows. Let's cut to the chase.

The presentation

"It is a pleasure to be here tonight. Before I get started, I want to thank everyone for taking the time to come out tonight. Most importantly, I want to thank you for your support and loyalty to OS/2 over the years. I think, in the final analysis, that loyalty and that support made a huge difference in terms of what IBM, a couple of years ago, decided to do, specifically, to continue to invest in OS/2. And we are going to continue to invest in OS/2 as we go forward. [IBM CEO] Gerstner is a very strong supporter of what we are doing with OS/2.

"The purpose tonight is: I want to share with you where we are taking OS/2. I readily admit that this will probably not necessarily excite everyone in the audience, and I'm sure there will be some who disagree, to some extent, with the direction we are taking OS/2. For that reason, after I present where we are going, I would like to open this up and have a dialogue, because much of what you say, and many of your ideas can be very helpful as we continue to shape the direction of OS/2.

"We are positioning OS/2, primarily, around two major thoughts. One is, we are beginning to position OS/2 around the server managing the application. We see this as a major trend in the industry. It is most pronounced around the business enterprise segment of the market, and the majority of our business customers are asking us to begin to move in that direction. Our recent WorkSpace On Demand product is the first step in that direction. It is an OS/2-based product that will allow customers to manage their applications from the server.

"The second major thought is that we are positioning OS/2 around the Java application model. We see the industry moving rapidly around Java. We see it moving faster than we did around the Windows application model, and we see a major battle beginning to shape up in the marketplace between what I'll call Windows and pure Java.

"We are positioning OS/2 firmly in the Java application model. That has always been an issue with OS/2, particularly the 32-bit Windows part, so we're committing to position the product there. Keep those two thoughts in mind as I go through this.

"Now I'm going to go quickly because I know you probably want to ask questions and have a dialogue more than you want to listen to me. But essentially what I'd like to do in fifteen or twenty minutes here is take you through a very high level of what IBM is doing, what the software group within IBM is doing, and where OS/2 fits. Then we'll get into some dialogue.

Network computing

"Network computing isn't something we're doing with just OS/2. We are committing the entire corporation around this thought, and around providing leadership in this

area. IBM is joining forces with some otherwise strange bedfellows to exert leadership in this market. We are teamed up with Netscape. We are teamed up with Oracle. We are teamed up with Sun. We are teamed up with many major players in this industry, to begin to lead this industry in this direction of network computing. Now let me point this out because every product, every hardware product, every software product, our services, everything we are doing, revolves around this central form.

"IBM did not take this leadership role in the client-server revolution that swept this industry in the 80's. The IBM company paid dearly for that. We saw our share price plummet. We cut our staff to significantly downsize this corporation, because we were unable to provide leadership in this next phase in computing, around the world. We're bound and determined that it will not happen again. That's the central point that I'd like to make here."

[Mike Lawrie showed a slide of eleven functional areas within IBM that he said IBM was spending about \$6.5 billion to develop.]

"These are the eleven fundamental things that IBM, as a whole, is working on. We break these out into what we call our core business, what we call our critical growth areas that IBM needs to very fully participate in: from network computing, to our industry solutions, to establishing leadership in our small to medium business segment (which, traditionally, IBM has been weak in).

"We see this as one of our major, major growth opportunities. We saw a whole new advertising campaign launched ten days ago, around the small and medium business segment.

"We're beginning to make a major effort with the emerging markets around the world. I was in China a few weeks ago with some of their top minister;, we talked about how we establish the Java application model in China. How do we build an indigenous software industry in China, that is not dominated by Bill Gates and Microsoft? We had the same discussions in New Delhi with the Indian government, in South Africa, and in Central Europe: markets that look to have very great potential for us as we move forward. We're looking at how we can best compete in this industry.

How companies compete

"The number one way a company competes in the information industry today, is by establishing a value net around different layers of the architecture. Of course, the most significant example of this is the value net that's been established by Intel and Microsoft. That value net controls the operating system, the semiconductors, the microprocessors. That forces all the major players within this industry to conform to those base, or underlying technologies or architectures. IBM did this with the mainframe, and Microsoft and Intel have done it with the PC. We think that there may very well be new players that dominate the next phase of computing around network computing, around the network computer, etc.

"The second way you can compete is to control the foundation, and again Microsoft and Intel are an example of this.

"The third way you can compete, is to build around established standards. Middleware software companies build [software] around those standards. SAP is a great example; SAP not only takes advantage of these underlying architectures, but has established a standard in the application area that forces other companies to work with SAP.

"The fourth way you compete is by establishing neutralizing platforms or architectures. This is where we are positioning Java; this is where we are positioning network computing. We are beginning to position this as an alternative to the traditional fat client or PC-centric architecture. We are doing this with the Java application model, and we are doing this with this notion of servers managing the applications. "The fifth way you compete in our industry is to establish services or solutions, or integrate with services and various solutions to provide solutions to the end user. IBM does that; many of you in the audience do that.

"I show you this as a framework because what we're focused on with OS/2 is around number four. We originally started with OS/2 as building around established standards, which was Windows and Intel. Now we're positioning OS/2 as part of this competing architecture or competing set of standards versus Windows. [It's] a very, very fundamental shift in strategy and where we are spending the development dollars."

Commercializing the Internet

"Our software strategy in IBM is built around commercializing the Internet. It is about helping customers do business electronically, helping them do business on the Internet.

"Ninety percent of the world's digital content is on IBM systems right now, on mainframes, on AS/400's, on DB2. These are heavy-duty, transaction-oriented systems. We are trying to take those transaction systems and extend them out through the Internet to business partners, customers, employees, etc. That is what e-business is all about.

- O "It's about a bank in Europe that takes a mainframe-based mortgage application process....
- O "It is about going into a car dealer to by a car and having your credit approved over the Internet....
- O "It is about Dell Computer which now sells a million dollars a day worth of computers off their web site.
- O "It is about Charles Schwab, who has built an electronic stocktrading business that has grown by orders of magnitude in just two years.

"We are providing software and systems to take those back-end transaction systems and move them out, via the Internet, to a whole new group of users.

"If ten users were attached to a mainframe, a hundred users were attached to a client-server system. In the network computing world, we see that growing to a thousand. We're talking about orders of magnitude, in the number of devices and the number of people that will interact in this network computing world. That's where we're positioning IBM, IBM software, and OS/2. [Shows a graphic of components and functions.]

"Here is the architecture we announced in March: our Network Computing Framework. It is comprised of business enhancers, connectors (it connects the server to the mainframe or central server). It's comprised of several servers, from mail servers all the way up to universal database servers, and our heavyduty transaction servers. All of which support OS/2.

"Our strategy around OS/2 was to refocus the strategy around our business enterprises in particular, because that's where we had the most success on a worldwide basis We're positioning it around the server and around Java. We've established a new distribution model, where most of our products are now distributed electronically through our Web sites. We've positioned the server as a major player in that architecture. We're positioning it around Lotus Domino, around ebusiness, around Java. Our leading industry solutions, that the IBM company is building (like StorePlex, our electronic business for the distribution industry, or many of our banking industry solutions) all run on OS/2.

"From a client standpoint we're positioning this around Netscape. We're providing Netscape support of the client. You'll see us (later this year, [or] the early part of [next] year) ship Navigator 4 with OS/2. We just shipped the Java Virtual Machine 1.3, which has about an 80% performance improvement over the 1.1 reference platform. We are positioning it around the server; that's what the whole WorkSpace on Demand announcement was about

"By the way, WorkSpace on Demand has received really outstanding foreign coverage and posi- looks to be extremely important to tive response from the press, on a worldwide basis.

"Although some say Java is moving slowly, in my view it's moving quicker than anything we've seen in our industry. Conservatively, 400,000 to 800,000 developers. In China, we're seeing Java developers being turned out like an assembly line. We see most of the corporations around the world beginning to experiment, and committing fairly serious mission-critical applications to Java. We're beginning to see Java Virtual Machines proliferate within the client workstations on a worldwide basis.

"We'll begin to see Java operating systems over time. Sun is working on a Java operating system, in fact; I think they've already announced one.

The client

"Specifically, where we're taking OS/2 on the client is ... to Work-Space on Demand, which is a derivative of Warp 4 with some enhancements. Then over time, moving to more Java-based clients, meaning Java OS, etc. On the server side, we took Warp Server, and the derivative of that is WorkSpace also, because WorkSpace is a server and a client. Now we're beginning work on derivative Warp Server products as well as the ability to move OS/2applications to AS/400, System/390, or for that matter, any server, so that we provide maximum flexibility to our customers as to were they want to go with their applications. [Shows Chart.]

"This is where WorkSpace is positioned; you have the old nonprogrammable terminals here, you have IBM's network computer, which we are shipping and will ship new versions of next year. You have the NetPC ([though] IBM [just] announced they were not going to ship this right now); then, of course you have your traditional, what I call the fat PC.

"(One of the reasons we decided not to ship the Net PC is tremendous overlap between the network more focused, and we are providing

computer and the traditional PC. WorkSpace on Demand will support any of these clients.)

"We have tried to position this in a market that looks to be growing; it our customers. This is the first step in terms of some of the issues our customers have, and then the value we think we are beginning to provide in this first release of Work-Space on Demand.

"The value proposition we are offering our customers is: they can continue to run OS/2 applications, they can run 16-bit Windows applications, they can run Java applications. They can begin to transition to this model of the server managing the application, managing the client; they can begin to simplify their installation, simplify their architectures, and take advantage of some of the cost savings that are beginning to prove themselves out in this environment.

"We're [also] establishing a services business to help our customers migrate to the new versions of OS/2; we've provided a set of skills in this services business that help our customers convert existing applications to Java, and, in many cases, write brand new Java applications. (We have about ninety of these contracts that we're working on right now, some of which we've announced publicly; others we will announce in the ensuing months.)

"We're continuing to spend a lot of money on OS/2. We are not backing off on that, and the reason we're continuing to do that-the press asks me this all the time: 'Why, Mike, are you continuing to spend millions and millions and millions of rily set up to run the 16-bit Windollars developing OS/2?'-I'll repeat to you the same answer I give them. The reason we are spending that money is that OS/2 is very, very important to our customers. Therefore, it is very, very important to IBM because we are not going to let those customers be abandoned. We are allowing them a path to this new compute model I've described, and allowing them a very comfortable bridge from where we are today, to where we are going.

"In summary, we are positioning OS/2 differently. It's not everything to everybody. It's more targeted, it's the skills and the services and the development resources to get to where we are positioning.

"I know there's been many concerns, some of which I read in my email in-basket. I certainly don't have all of the answers or all of the issues up here." [Points to list of issues on display.]

Lotus and IBM

"One of the biggest, of course, has been Lotus and IBM and how the OS/2 division is working with Lotus. That has been an interesting relationship. It is beginning to improve, because Lotus is beginning to move to this server-managed notion, they are beginning to move to Java. You'll see Kona next year. Kona is a Java-based SmartSuite, if you will. 1-2-3 will reside on the server; when somebody wants to do a 1-2-3 application, they will download what they need from the server. The word processing application will reside on the server. We think that will handle about 80% of what our customers need to do.

"There's a lot of different things going on. As I've said, we've really started to integrate OS/2 into the total network computing picture, and that is beginning to show some real dividends to our customers.

"With that, I'm going to stop and answer questions. I've got some folks here with me who can also participate. With that, I'm going to turn it over to you guys."

Q&A

"What is the purpose of the WinOS2 code?

"The WinOS2 code was primadows applications, and that will continue."

[There's a short gap here while I switched tapes, but the follow-up question was about plans to enhance WinOS2 and the lack of support by vendors for running their applications under WinOS2.]

"... the reason is many of the game manufacturers have moved to 32-bit applications, which are not supported under OS/2. IBM could not afford to spend the money doing all of that work ourselves. So in many instances, some of those companies no longer support WinOS2. WinOS2 does not support

continued o

November meeting BackAgain/2 to present at meeting

by Esther Schindler

As program chair, I've always tried to strike a balance between scheduling meetings that are "glitz"—fun, flashy topics on cool topics that might not always be relevant—and the "guts" of software and tools that help us get down to work in the real world. We've spent the last few months looking at philosophical topics; it's time to get down to brass tacks.

At the Phoenix OS/2's Society general meeting on Tuesday, November 11, we'll be happy to welcome Brent Bowlby, president of CDS. He'll show us his company's best selling backup software, BackAgain/2, and talk about related topics.

For instance, Brent points out that the backup software market is a \$2 billion industry-despite the fact that only 18-20% of computers have a backup device attached. Brent will give his perspective on the backup market, as well as its history and where it's going. (That is, he'll do so in between soaking up the Phoenix sunshine, and appreciating his short escape from Minnesota. Minneapolis has been described as a town with two seasons: snow removal and road repair. Sometimes, we hear, they run out of money for snow removal.)

About BackAgain/2

BackAgain/2 is available in three versions: personal, professional, and enterprise. The primary difference between versions is the number and type of devices supported.

For example, Back Again/2 Professional has support for Automated Tape Changers and Libraries.

All versions take full advantage of OS/2 Warp, with IBM Workplace Shell "drag and drop" support, a built-in scheduler, password protection, and multiple levels of data compression.

With its standalone restore facility, Back Again/2 Enterprise eliminates the necessity to reinstall OS/2 before starting a disaster-based restore. You're up and running in minutes.

Back Again/2 includes a Workplace Shell Scheduler folder. You can schedule a backup set, program, or REXX script to execute at a specified date and time by dragging it into the new backup scheduler folder. "This feature alone makes the price of Back Again/2 an incredible value," said Brent Bowlby. "Stand alone scheduler utilities can cost \$100.00 or more."

The interface for selecting files to be backed up or restored is network aware. In the most recent version, the "drive scanning" message has been eliminated, and an estimate feature has been added to show the total number of files/bytes to be backed up. BackAgain/2 can detect all Novell, IBM LAN Server, IBM Warp Server, and IBM Warp Connect machines to which you are currently logged on, display them in the file selection window automatically.

A new, simplified interface for selecting drives to be backed up has been added. This "Quick Backup" interface makes selecting drives for backup as well as selecting the desired backup type and compression type extremely simple. Even the personal edition of Back Again/2 supports backup to floppy disk, hard disk, File Server and removable cartridges.

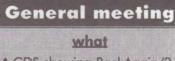
Choosing tape drives

Because CDS was asked to recommend tape drives so often, the company recently began offering their favorite equipment for sale—naturally, bundled with BackAgain/2. Brent can explain the choices among backup hardware, as well as backup strategies that we can each live with—and have a hope of implementing.

When and where

The general meeting is held at the Mountain Preserve Reception Center, at 1431 East Dunlap. The meeting starts at 7:00pm, but a question and answer session begins at 6:30pm. Don't forget to join us for the after-meeting meeting, when we reconvene at the Coyote Springs brewpub.

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CDS showing BackAgain/2 and backup hardware

where

Mountain Preserve Reception Center 1431 E Dunlap Phoenix, Arizona

when

▲ Tuesday, Nov 11, 1997 ▲ 6:30pm: Q & A session ▲ 7:00pm: Regular meeting

November 1997 — extended attributes 11

Coming events

This is a list of events scheduled by the Phoenix OS/2 Society. Unless otherwise noted, active members may attend any scheduled event for free.

Meeting notes

For the latest updates on the Society's event calendar, check the Web site at http://www.possi.org.

For meeting information and other queries, call the Phoenix OS/2 Society's voice mail at 602-949-4341.

If you have suggestions, ideas, or comments on the content of general meetings, contact the Society's Program Chair, Esther Schindler, at the general meetings or send email to esther@bitranch.com.

November 1997

 4 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.

 Developer's SIG. Meeting is 6:00pm to 8:00pm. Coordinator Lyle Wilson. Location: KDC, 2999 N
 44th St, 4th floor, Phoenix.

5 Magazine submission deadline for December issue. Articles should be sent to editor@possi.org. For other arrangements, call 602-585-5852.

- HOW (How OS/2 Works) GIG. Meeting is 3:30pm to 5:30pm. Coordinators Rosey Rosenwald and Stan Kropen. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- General meeting; CDS BackAgain/2. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 22 Board meeting and magazine prep. Meeting is 10:00am to 1:00pm. Eat a brunch, learn about the inner workings of the Society, and help get extended attributes ready to mail. Location: Bill and Esther Schindler's house in north Scottsdale.
- 24 FOOD (Friends Of OS/2 Dineout) SIG. Email Rosey Rosenwald at robert@perfectniche.com for location, time, and cuisine.

December 1997

- 2 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 2 LAN SIG. Meeting is 6:00pm to 8:00pm. Coordinator Elliot Abramowitz. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 5 Magazine submission deadline for January issue. Articles should be sent to editor@possi.org. For other arrangements, call 602-585-5852.
- 9 HOW (How OS/2 Works) GIG. Meeting is 3:30pm to 5:30pm. Coordinators Rosey Rosenwald and Stan Kropen. Location: Mountain

Preserve Reception Center, 1431 East Dunlap, Phoenix.

- 9 General meeting; Epson (unconfirmed). Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 20 Board meeting and magazine prep.
- 29 OS/2 Marketplace conference committee meeting.

January 1998

- 5 Magazine submission deadline for February issue. Articles should be sent to editor@possi.org. For other arrangements, call 602-585-5852.
- 6 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 6 Developer's SIG. Meeting is 6:00pm to 8:00pm. Coordinator Lyle Wilson. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- HOW (How OS/2 Works) GIG. Meeting is 3:30pm to 5:30pm. Coordinators Rosey Rosenwald and Stan Kropen. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 13 General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- **24** Board meeting and magazine prep.

February 1998

- 5 Magazine submission deadline for March issue. Articles should be sent to editor@possi.org. For other arrangements, call 602-585-5852.
- **3** net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 3 LAN SIG. Meeting is 6:00pm to 8:00pm. Coordinator Elliot Abramowitz. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.
- 10 HOW (How OS/2 Works) GIG. Meeting is 3:30pm to 5:30pm. Coordinators Rosey Rosenwald and Stan Kropen. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- 10 General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.
- **28** Board meeting and magazine prep.

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November

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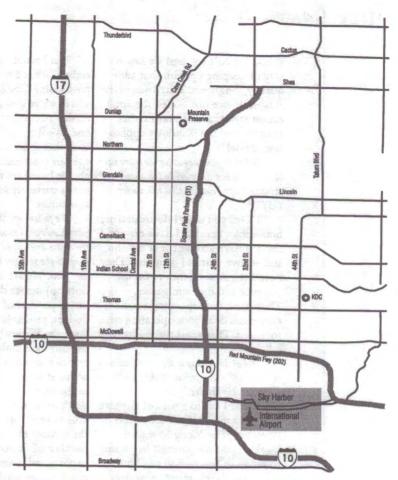
Meeting locations

General meetings are held at the Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

From the Black Canyon, exit at Dunlap and head east. From the Squaw Peak, exit at Northern. Go west to 12th Street, turn right and go north to Dunlap, turn right, and it's two blocks up on the right.

The "How OS/2 Works General Interest Group" now meets at the Mountain Preserve Reception Center on the afternoon of the general meeting.

The Internet SIG, Developer's SIG, and LAN SIG all meet at Knowledge Development Center, 2999 N 44th St, Suite 400. That's just north of Thomas, in the building with the green dome. Plenty of free parking space is available in the garage behind the building.



sigs

If the mailing label on the

back cover says "sample,"

then this may be the only

attributes that you will

ever receive. If you want to

keep getting the magazine

(and receive all the other

benefits of membership), you

must join! A 12 month mem-

\$30. (See the form for mem-

areas.) Tear out the applica-

tion form, fill it in, and mail it with the membership fee to the Society's address.

bership in the US is only

bership pricing in other

copy of extended

net.SIG

by Mike Briggs, mike@possi.org

At the last meeting, we installed the plug-in pack for Netscape/2, and went over multi media on the web. You download the plug-in pack at www.internet.ibm .com/browsers/netscape/warp/. We also went to the Adobe Web site and saw how to download the Acrobat Reader for OS/2. There are many other plugins, but that's for another meeting.

Next time, I'll try to get a representative from COX Cable to talk to us about cable modems. We'll continue on with plug-ins after that.

HOW GIG

by Stan Kropen, skropen@ibm.net

The October 14th HOW GIG had a 100% increase in attendance. Six of us participated in a discussion of a potpourri of topics.

We looked at how to create a CSV stock quotation file from the Yahoo Web site and download it to a modified IBM Works spreadsheet; how to use the XCOPY command with the /h/o/t/s/e/r/v parameters to copy all files in a directory and its subdirectories to another directory. This excellent routine was first made known to me by Bill Schindler. Finally we compared two similar REXX programs that dealt with amortization. One program used the ARG instruction and the Arg() function, and the other did not.

Robert (Rosey) Rosenwald will facilitate the next HOW GIG on November 11th and present something interesting as he usually does.

Mike Lawrie (cont)

the 32-bit API set, and we saw no way of keeping up with that adequately, long-term. That's one of the reasons we've positioned the application model around Java rather than around the Windows application model."

What do you suggest for the home user of OS/2, when there are so few games and children's applications that run under OS/2?"

"I'll tell you what I do around my household, because I have the same thing. I have an eight year old son and an five year old daughter. They have their Aptiva; they're on the Internet and they run games. They're on two operating systems; they run a dual-boot operating environment. That's just the reality of it."

"What do you say to the small business or home office user about sticking with OS/2 in the future?"

"What I say to a user of any size including the CEO of Deustche Bank or Hong Kong Shanghai Bank: If you see yourself beginning to move to this notion of a servermanaged environment, regardless of size, and if you see yourself moving in the Java direction, and if the mission-critical applications you have today are meeting your needs, I suggest you upgrade and move with OS/2. If most of your future applications are going to be fat PC, traditional PC orientation, and it's going to be 32-bit applications that you buy off the shelf, then I think OS/2 is not going to meet your needs over Maginot Line around one-hundred percent the long term. That's what I tell them. It's as straightforward as I can Sun, Netscape, and a number of others, make it."

"So basically you're conceding the small business customer to Microsoft because they're the ones that are buying their software off the shelf?"

"Where the orientation is going to be off-the-shelf software, I do not see how long-term, we are going you're taking?" to compete effectively in that market, because we're not supporting the Win32 API set. Now, for the larger installations, there are solutions. The Citrix solution, for example, or NCD... there are other solutions. Some of those solutions are very suitable for certain custom-

"But I would not say we're conceding. What I would say is: we're positioning OS/2 here. This is where we're going to take OS/2. I readily admit that is not for everyone. We'll try to explain what it is and what it isn't, and if we encourage our customers to make the choice based on what meets their needs currently and in the foreseeable future."

"To follow up: Will IBM work more with hardware vendors to actually put out the device drivers, or are you going to leave it up to the vendors themselves?"

"No. We are working with [vendors on] device drivers; that is a major portion of our development budget, probably the single biggest line item. We are looking for ways to expand the number of device drivers we can support. We have a very active strategy to do more, not less, in the device driver arena. But I don't think we're ever going to be able to catch up, or support all of the devices that are out there. The number of devices are growing exponentially, and will continue to grow exponentially, particularly as we move into this network world. We are focusing most of our device driver investment around those requirements that are coming primarily out of the business enterprises. We survey those customers on an annual basis, then we work with the hardware vendors as well as do a lot of that work ourselves."

(Paraphrased) You've created a pure Java. On one side you have IBM, and on the other side is Microsoft with ActiveX trying to break that line. It seems to me that if you're successful, ten or fifteen years from now programmers will no longer write to Windows, they'll be writing to pure Java, and the question of shrinkwrapped software becomes moot. Is that the position

"Yeah, that's the basic theme. I hope it's more effective than the line you proposed. [Laughter] It is clear that two camps are emerging. In the spirit of candor here... a couple of things. One, I see OS/2 around as long as I'm around. OS/2 is not going to go away. It's being reposiers. For some customers they're not. tioned, but it's not going to go away.

"Windows is never going to go away; the analogy I draw is [that] Windows never displaced the mainframe application market. Windows brought about a huge increase in the number of users of computer technology. That expansion of the market has been dominated by Intel and Windows, no question about it, and that I do not see changing.

"What I do see, is we're entering this new phase, called network computing, that will once again expand the number of users and the number of applications, by orders of magnitude. [It] is yet to be determined, who will dominate that. Microsoft is taking the Windows API, Windows CE, they just announced a developer's kit for what I call Tier 0, for embedded devices, TV set-top boxes, etc.

"Smart cards. Smart cards-this is Mike Lawrie's prediction-smart cards will be the largest single use of computers ever. Because smart cards are currently 8-bit, they'll go to 16-bit, they'll go to 32-bit, and they are, in fact, computers. What is open, is what application model, what standards, what foundations, will dominate that expanded market.

"Yes, within that market we're drawing two camps. One is a pure Java camp that's built on open standards, portability across all platforms, and the other is a proprietary architecture which is Windows. And that battle will rage, not for ten years, but I believe we will know within two to three years. It may take longer, we aren't going to have 32-bit smart cards for a while, but you can take basic Java and apply that to a smart card. You can have Java run a set-top box, you can have Java operating system run a Tier 1 client, you can put Java on any server. That would allow you to develop this architecture that spans this growing number of clients and applications. That's what's so appealing about it. But you're right, that's the battle we see."

"Will IBM, with Warp Server, continue to support the multi-OS environment... for users? Right now, there's a pretty decent Win95 client, OS/2 client, NetWare interface. Will this continue, get better?"

"Yes. We're planning to continue verting them to Java; that's what that and enhance it. We're looking at taking WorkSpace On Demand and extending that multi-client support to that environment, which we think would be a tremendous benefit.

"If I can just go back to the Maginot Line: we also see Microsoft moving slowly towards this notion of server-managed applications. It is the antithesis of their business model. Most of their profits come from application software (specifically Office) on a traditional client. To say "Let's get rid of all those copies on the client, put one copy on the server," is not something that is wired into their DNA. Just as PCs, and moving the workload off the mainframe, was not wired into IBM's DNA. We paid a big, big price for that genetic defect."

"Are you working aggressively at putting whatever you want to call WorkSpace On Demand on ISPs, so that I can do a dialup and have WorkSpace On Demand from home?"

"Yes, that thought has certainly crossed our mind ... again, in the spirit of candor here, I do not have anything in the plan in the next six months to do that."

(Questioner continues:) "The reason I mention that is we have the bandwidth to do that [ML: "You're right"] ... and we're talking about TV-top boxes. If you can get that in place and say We're coming out with that little [product] ... (ML: "That's a good idea. Let's get that down. Seriously, we have talked about it. That's why I wanted to have this dialog..") (Someone else chimes in:) "And you even have an ISP of your own!" (ML: "Yes.") [Laughter] architecture running in the same box."

From this point on I was not able to hear most of the questions well enough to quote them exactly, so I'll paraphrase where necessary. The next question was garbled but its gist was how much of Java development would be rewrites of existing products and how much would be new products.]

ML: "I don't know if they'll be converted. I think a lot of the new application development will be around Java. Most of our solutions that we are building internally, [such as] Footprint (one of our premier banking industry software application suites), we're converting to Java. Lotus is taking their personal productivity applications and con-

Kona is all about. We are developing and over again." a Lotus... not really a Workplace Shell, but sort of a webtop that will be Java-based. I see some existing applications being converted to Java. But I see most of it around new applications. A lot of these applications would have to be rearchitected anyway to manage them more from the server."

(The next question was about WorkSpace On Demand and mobile users.)

"Mobile strategy is very, very important. The initial version of WorkSpace On Demand is in a connected environment. That is one of the top priorities we have: to extend that to mobile.

"For a lot of our larger markets, connected is fine. For example, we've got a tremendous market share with OS/2 in the banking industry, largely in branch banks. Tellers, ATM's, those types of applications-those are all connected environments.

"In other industries, however, like insurance (where we also have a large installed base), OS/2 is used in an agent environment which is, increasingly, a mobile environment. One of the top priorities for Work-Space On Demand is the mobile environment."

'I have to assume that OS/2 is going to evolve more and more into a client/ server architecture, that is, an OS/2 server and an OS/2 client. Specifically, I'm kind of curious, as this thing evolves, you are considering packaging this thing at a price point that I can afford, the server and client

(Mike passed this one off to John Albee, a member of his staff.)

John Albee: "I think what you have to look at, is were you're going, where everybody else is going, and I find myself running OS/2 more and more in the Web area, so I look forward to running applications that are provided by ISP's so I don't have to load and reload applications... I think were you're going to see things coming from, from a home standpoint, you'll be getting things delivered over the internet.

(The questioner follows up:) 'I can see that for a lot of things, a lot of things I only use occasionally, but I'm thinking there are going to be one or two things I'm going to be using all the time,

and I'm not going to want to be getting over

"Well without getting into a lot of top secret stuff, there's stuff called persistence which is the ability to extend the cache or to keep the cache alive a lot longer. So we're not talking about having to keep on bringing things down every time you use something. In fact, even today with Java applications you have a lot of persistence in the form of cache. But there's all sorts of work being done to try to extend that whole capability of cache, so that it's a little better managed than it currently is."

In the interest of space, I've left out some follow-up discussion about running games written in Java from the internet.]

ML: "One of the things we're encouraged about with Java, is obviously, the more applications that get written around Java, the more the application issue around OS/2 become a moot point. Your issue was one of timing, and you're absolutely right.

"But we see potential solutions today, that frankly, eighteen months ago we didn't see. All we saw was the enormous investment we would have to make in the 32-bit API set. By the way, you never get there, you just chase that forever. It's so dynamic, you get to a point and Microsoft changes a couple of things and you have to start all over."

There was another question about WinOS2 support by ISV's that was unintelligible. This is part of his response.]

ML: "The truth is, there's a huge market around Windows 3.1. You'd be surprised. There's a big install base that is not moving that quickly. Almost forty-five percent of the installed base worldwide is 3.1. I know this because in certain parts of the world, we are beginning to do some work on 3.1, because we have some of the rights to the 3.1 code and there's a lot of interest, particularly [in] the embedded market. So it is a larger installed base than you might think. If you look at the total number of applications that have gone to 32-bit, it's a relatively small number in comparison to the universe of applications."

There were some other questions about specific support issues continued on pg 19

building blocks

by Marilyn Pizzo

In recent months, we've learned how to change the Workplace Shell desktop, and we've explored OS/2 features to make our computing life easier. This month, let's choose a different direction. Instead, we'll jump into the inner workings of OS/2 just a little, to see what goes on. How does OS/2 control what we do? In particular, we'll explore the OS/2 INI files.

Just what is an INI file? What does it do? Is it something you can play with or should you just leave it alone?

Where INI files come from

During the system configuration process, OS/2 Warp uses two types of files: RC files and INI files. RC files (which you can find, and peek at, in the OS2\INSTALL directory) are ASCII text files used by the installation process to create the system-readable, binary INI files. INI files are used by OS/2 (and some applications) at start-up time.

Does this sound a bit technical? In a way it is, but without INI files your desktop won't come up when you start your system.

You will probably never have to worry about INI files; OS/2 manages all of this for you. OS/2 maintains all this information in the INI files. However, have you ever had your desktop look strange when you boot up—perhaps a missing icon?

OS/2 uses two main INI files: OS2.INI and OS2SYS.INI. They are probably the most crucial system files in OS/2. The OS2SYS.INI file, sometimes called the SYSTEM.INI file, holds information about your system, such as the printer drivers installed, hardware details (serial and parallel ports), and communication parameters. Both application programs and the OS/2 system use this file. This is not a file that you should modify—at least not lightly!

The OS2.INI file is sometimes called the USER.INI file. In it you will find information about the configuration of your desktop, such as color schemes, icons, and the size of windows. When we experimented with changing the desktop colors in previous articles, that information was changed (automatically, by OS/2) in the OS2.INI file. The operating system will use the colors (and other settings) stored in OS2.INI every time you boot up your system. When you properly shut down your computer, this file is updated.

The OS2.INI file also contains information on all WPAbstract object types, their locations, and icons. The Workplace Shell uses the INI file to store information on application associations by file type and filename filters, as well as a list of the file types recognized by the Workplace Shell.

The first time OS/2 starts it looks in the OS2.INI to see how to build your desktop, folders, and objects.

Now you know why you don't want to mess with this file. To make it even more difficult, the OS2.INI file isn't an ordinary text file; you can't simply view it with a text editor. (They sure want you to get the hint, don't they?)

If you try to find these two files, you might look for a while. When OS/2 Warp is active, both the OS2.INI and OS2SYS.INI files are marked as system files. Therefore, if you run the DIR command in your OS2 directory you cannot see these files. If you use DIR with the /AS option you can see them. (The INI files will be visible if you boot from a floppy.) By making these files somewhat invisible, it is less likely for someone to unintentionally interfere with them, resulting in corrupted INI files.

When INI files go wrong

We all have probably had at least one experience where we couldn't shut down our system properly. You had to do the three finger salute or completely turn off the power. In such cases, it's possible for one of the system files to be corrupted because of the dirty shutdown. Corrupted INI files can ruin your whole day, and novice OS/2 users often believe that they have to reinstall the entire operating system just to get their desktop back. Fortunately, this isn't so.

If you have the archive option active, you can reboot and select a previous session where everything was fine after pressing Alt-F1 when the white box appears.

Even if you didn't have the archive option active, you can recover from a case of corrupted INI files. First, sometimes rebooting cleans out the cobwebs and everything is fine. In more upsetting cases, you can rebuild the INI files using the following procedure; this will replace both the OS2.INI and the OS2SYS.INI files with new ones, containing the original default values of OS/2.

1. Turn on the computer.

- 2. Press Alt+F1 when the white box appears.
- 3. From the Recovery Choices screen press C.
- 4. Type C: and press Enter (or what ever letter represents your boot partition).
- 5. Type
- CD OS2
- 6. Type
- ATTRIB -s-h-r OS2*.INI 7. Type
- REN OS2.INI OS2.OLD
- 8. Type
 - MAKEINI OS2.INI INI.RC
- 9. Type

REN OS2SYS.INI OS2SYS.OLD 10.Type

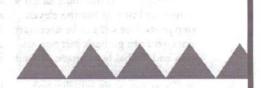
MAKEINI OS2SYS.INI INISYS.RC 11.Press Ctrl+Alt+Del to reboot

your computer.

If you use this process, you'll have to go back and change colors, fonts, and so forth, but you will be up and running. You'll also have to recreate objects, folders, and icons for your applications.

[Editor's note: While IBM's instructions tell to you blow away the existing INI files, we've learned—the hard way!—that when you recreate the INI files in OS/2 Warp 4, a folder is placed on your desktop with your "old desktop." You can just move your old icons to the new desktop, saving a lot of time. However, we don't recommend that you do a lot of empirical





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.building blocks (cont)

testing of this admirable enhancement, because it's still no fun. ---ES]

A word to the wise is to use the archive option. It may take an extra minute to boot up but the eleven step procedure will not be necessary since you can go back just one session and probably not have to hunt and search for anything.

These two main initialization files pretty much control everything you see on your desktop as far as what color it is, where it is on the screen, or, for that matter, if you can see it at all. They control whether or not, when you push the Print button, your default printer will respond accordingly. These powerful little fellows can bring you to your knees in a heartbeat if they get corrupted.

Don't even think about touching an INI file if you don't know what you're doing. [Editors note: If you do choose to do so, Softouch's Unimaint is the most recommended tool for the job. —ES] Personally, I would rather start over than change an .INI file and have to repair it.

However, operating systems can be very mind boggling. If we understand how it works, we will feel more comfortable using our computers. Obviously it won't stop problems from arising, but knowing the whys and hows behind the operating system will help us be more confident that we can fix the problem ourselves—or at least know what might have happened!



See what OS/2 User Group SCOUG has to say about InfoOnCall :

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Apress velease Visix Software's powerful Java development tool

Visix Software Inc., a leading provider of enterprise application development and deployment solutions, announced the general availability of Vibe Enterprise for Windows 95, Windows NT x86, Windows NT Alpha, Solaris, Linux, AIX, HP-UX, IRIX, Macintosh, and OS/2. Visix also announced the general availability of Vibe DE for Macintosh, OS/2, Windows NT Alpha, HP-UX, and IRIX. Vibe DE is already available for development on Windows 95, Windows NT x86, Linux, AIX, and Solaris.

"Java developers are currently limited in their choice of development platforms," said Bob Flury, Visix Senior Vice President of Worldwide Sales, Marketing and Services. "Visix recognizes that people who develop on Macintosh, OS/2, and UNIX need Java development solutions too. With the addition of these new platforms, we address the needs of this community that other vendors often ignore."

Vibe Enterprise enables Java developers to build powerful database applications. Vibe Enterprise leverages Vibe DE, an Integrated Development Environment (IDE) with a collection of powerful classes used to build and deploy Java-based business solutions, ranging from standalone departmental applications to sophisticated distributed applications. Since March, over 100,000 copies of Vibe have been distributed worldwide.

The Vibe IDE includes an intuitive user interface, a compiler, debugger, editing tools, interface construction tools, and extensive runtime classes. It enables developers to do rapid prototyping, immediate testing and development of business-critical Java applications for deployment across multiple desktop and server platforms. Vibe Enterprise adds additional tools and classes for Forms and Fields, database connectivity and a Graphical Query Builder.

Vibe is designed to maximize code reuse by leveraging Visix's mature foundation classes, which also form the basis of Visix's flagship C/C++ product, the Galaxy Application Environment. To gain additional productivity through reuse, Vibe enables organizations to incorporate their investments in standard distributed object technol-

with a collection of powerful classes ogies through application integraused to build and deploy Java-based tion with ActiveX controls.

Platforms and pricing

Vibe DE is available at the introductory price of \$299. Vibe Enterprise is available at \$1995. Both products are available for development and deployment on Windows 95, Windows NT x86, Windows NT Alpha, Solaris, AIX, Linux, Macintosh, OS/2, HP-UX, and IRIX platforms.

Visix Software

Visix Software, headquartered in Reston, VA, offers the industry's most powerful development environments to enable rapid delivery of business-critical application performance in C, C++ and Java. Visix development technology includes not only Vibe, but also the Galaxy Application Environment, an award-winning client/server application development and distribution environment. Visix's customers include Fortune 1000 corporations, independent software vendors, system integrators, government agencies, universities, and research facilities. For more information on Visix and its products, visit Visix's web page at www.visix.com.

Mike Lawrie (cont)

that I've left out in the interest of space. The following includes Mike Lawrie's closing remarks.]

"I do appreciate you coming out tonight and I do appreciate the dialogue. I don't disagree with what anyone said...[garbled]...and in that sense it's been very beneficial to me. What I've tried to do tonight is share, very candidly and very clearly, what we're doing and what we're not doing. And I think the key thing here is that this time last year, most people considered OS/2 to be sort of dead and buried, at least if you read the press. "What I'm here tonight saying is that OS/2 is reinventing itself. It is not as grand a reinvention or strategy as we had five years ago, or six years ago. But it is a strategy that has been largely dictated by the realities of the marketplace, and it is being reasonably well received, for its pragmatism as [for] the fact that we are delivering what we say we are going to deliver.

"So in that sense, I hope it has been beneficial to you tonight to at least hear it from the horse's mouth, even though the horse has been beaten dead a little bit here. At least you heard from the horse's mouth what we're doing.

"And I just want to close with the way I started— which is, I really do appreciate the loyalty and all the hard work that this group has put into this product over a long ten years. That's what our birthday party was all about. And I'm looking forward to many more years where we are working together. So I thank you for your time tonight and your hospitality and Esther, thank you." @

PlusPack B.U.G.S. for OS/2

by Craig Greenwood

This is a really neat little game that is fun to play. What is it like? I've got one word: Galaga. Do you remember Galaga: Space Invaders on steroids? Well, PlusPack B.U.G.S. is the same... only different.

Like Galaga, creatures swarm at you while you try to avoid being hit by them, while you also attempt to shoot them before they shoot you. The action can get intense. Every tenth level is a "MasterBug" level, where you duke it out with one big Boss bug who is not only shooting at you, but is also hurling meteors at you with two big arms.

B.U.G.S. is different from Galaga in several ways, but most evident is that, instead of space aliens attacking you, it is Bill's Unbelievable Ghastly Spaceships. (This is a not-so-subtle reference to a certain someone who routinely unleashes swarms of binary bugs on an unaware/uncaring public.) These "Ghastly Spaceships" look like hitech insects and arachnids.

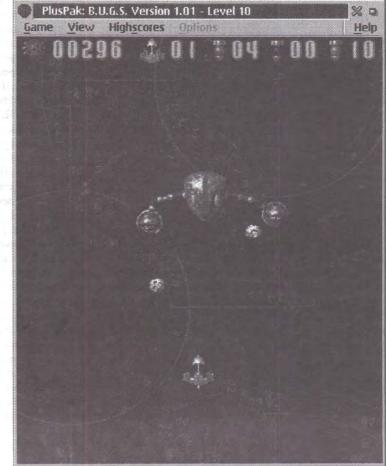
Using the software

Your space ship has access to the entire playing field as you move it around with the arrow keys. The ship's basic weapon is a laser-activated with the space bar.

Most levels provide an opportunity to get one or more of three different power-ups. The power-ups are: shields (which are active for six seconds or until depleted by damage), missiles (which target the nearest bug), and rapid fire for 10 shots at a time.

The action is very challenging. In a couple of weeks of testing I have only been able to get to level 24 of the 50 provided levels, and this is only on the beginners setting. The Options Screen allows you to choose between Rookie (beginner), Veteran (intermediate), and Elite (advanced) difficulty levels.

The Options Screen has other settings, such as the ability to tailor game speed to various speeds of hardware, from 486 to Pentium 200. The Graphics Thread Priority can also be adjusted.



Another setting that I appreciate is the Random Levels. This does pretty much what you would expect, randomizing levels instead of maintaining them in a strict sequence. As I mentioned earlier, I have difficulty getting past the first 20 levels on a regular basis, but when random levels is selected I get a chance to see some of the later levels without having to "earn" my way there. While this is good, it would be nice to give still a few more playing options. For example, I'd like to be able to start at a specific level—or at least any level to which you have previously "earned" your way. Or, if not "any level," then at the beginning of a given 10 level series (level 1, level 11, level 21, etc.).

I like having the Pause button as readily accessible as the ALT key. Being able to hit the key easily without having to look for it is a neces-

sity, since the onslaught of the bugs can at times be relentless, even at the beginners level. It is a bit awkward, though, for me to get to the shields button in the heat of battle; keeping a finger poised in readiness over both the shift and control keys (for shields and missiles) is more challenging that it needs to be. The Control and Alt keys would be a bit more convenient; make Shift the Pause key and keep Fire as the Space Bar. Better yet, how hard could it be for the developer to make the four action keys user configurable?

Pros and cons

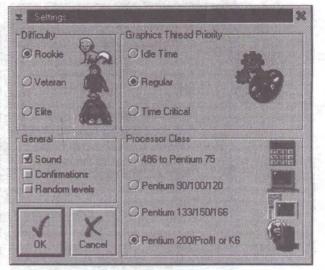
My biggest complaint, and one that I feel is significant, is that there needs to be a "safe" period after a new ship materializes to give you time to get oriented after you "die." At least, the game should wait for you to press a key (such as the space bar) to place your new ship into battle. It's frustrating, after losing a ship, to have a new one appear right in the middle of a haze of bombsonly to be destroyed again immediately.

Even without my suggested changes, PlusPack B.U.G.S. is worth the \$24.95 list price. It doesn't gobble up a pocket full of quarters like Galaga use to do to me, so it paid off after just a couple of evenings of playing.

There are some known problems with Video and Sound. I encountered one, requiring that I disable EnDive on my Matrox Mystique. The same fix is necessary on the Millennium, too, but not the Millennium II. Reportedly, Stardock is working with Matrox on a solution for this.

PlusPak: B.U.G.S. can be purchased directly from Stardock Systems for \$24.95 (\$24.00 from BMT Micro) for electronic distribution, or \$29.95 on disk. I got my copy via download; the 1418k file took approximately 8 minutes on a 24k modem connection. A 169k fix kit is available, which mostly provides joystick support. Also, a downloadable demo is available at www.stardock.com/products /bugs/bugs.html

System requirements: 486 DX2 66 MHz with 8 MB RAM (minimum), OS/2 Warp 3 or higher, DIVE compatible video card running at 640x480 with 256 colors, High Resolution Timer. (If you're running OS/2 Warp 3 go to the PlusPak: B.U.G.S. homepage and



download the HighRes Timer, DART, and DIVE updates.)

press release Money Tree for OS/2 available now

Money Tree, an innovative new per- software by providing support for sonal finance software suite for OS/2, is now available for download and purchase. Money Tree has been under development by Mount Baker Software for about two years. The program has undergone extensive beta testing which led to signif- data is accessible with data trees. icant changes and improvements over the development cycle.

Money Tree is powerful. It lets users track a variety of financial activities, including checking, savings, cash, credit card and loan activ- tried it: ities. Money Tree helps users pay bills, whether they write checks by hand or use their PC to print checks. Money Tree users can take the monthly statements from banks, credit unions, credit card companies, and reconcile data with what's been entered in Money Tree. In addition, there are also modules for creating budgets, reports and even modules to help analyse financial alternatives. Money Tree also imports data from other financial

the OIF format.

You create new accounts by dragging and dropping templates. New account ledgers can be placed anywhere: on the desktop, in folders, or in launchpads. Much of the You can create custom queries with point-and-click. Printing checks is as easy as drag and drop.

The Preview Edition of Money Tree won praise from those who

- O "It is without a doubt the most well written OS/2 program, if not the most well written program, period, that I have ever used."
- O "Runs beautifully...fast and snappy."
- O "This was some of the best nongold code I have used in a long time."
- O "We can all 'beam with pride' at Mt. Baker's Money Tree."

Mount Baker Software, a small independent software developer, is based in Mount Vemon, Washington, about an hour's drive north of Seattle. The company was founded by Bryan Minor in 1995, who felt there was a need for top-notch software for OS/2 users. Minor's goal is software which takes full advantage of the power of the OS/2 operating system and OS/2's Workplace Shell.

Money Tree is now available for download from the Mount Baker Software web site at www.mountbaker.com in a limited transaction version which can be unlocked by purchasing a registration ID. Money Tree is available for \$69.95, exclusively from BMT Micro and its worldwide affiliates. (At this time Money tree is available only via download.) Money Tree requires OS/2 Warp 3 (FixPak 17 or later) or OS/2 Warp 4 (with any FixPak except 3), 16 MB RAM and about 12 MB free disk space.

.vandom bits Input queue

compiled by Esther Schindler

This month's batch of new and updated OS/2 applications is a little slim. It's probably because several vendors are planning announcements at Warpstock. In any case, here's what's new this month.

Meal Planner

The Meal Planner for OS2 Warp allows you to keep track of the nutritional value of the foods that you eat and helps you plan your meals each day. You can print a daily calendar so that you can plan your meals weeks in advance. You'll know exactly what you're putting into your body, and keep track of things such as daily fat intake, fiber intake, and the number of calories per day. Also included is an exercise module that shows the totals calories burned per hour. Plus, you can keep track of your exercise routine.

Registration: \$20. Available at BMT Micro.

AWACS

AWACS is a slick system state monitor for swap size/used; memory total, free, resident; system working set size/min/accessed/peak; CPU idle pulse display; clocks; caller ID logging; baud to 115200, BBS hooks. Output to MDA mono display or PM desktop window or both. COM driver leaves DTR as-is on device close. All native OS/2 applications and drivers.

Registration: \$20, at BMT Micro.

Numlock2

Numlock2 is simple and effective and it works! Simply put, this utility will turn-on your numlock key everywhere in the OS/2 system. Registration: \$12, at BMT Micro.

Registration: \$12, at Divit Mi

Cyno's Editor

Cyno's Editor is an universal text editor written for the Java platform. It is similar to OS/2's System Editor, Windows' Notepad, and X Window's Text Editor. Now, you can work on different systems, but use the same text editor, with the same user interface and product features.

Cyno's Editor uses native text edit controls, so it works just like your other applications.

Unlike other toy applets, Cyno's Editor has all the features you'd expect: open and save; copy, cut, and paste; find and replace; upper or lowercase; and so on.

The text editors bundled with each operating system (OS) have neither a universal user-interface nor the same functionality. Users who constantly switch between OSs or text editors will greatly benefit from the universal interface and functionality that Cyno's Editor provides.

Registration is \$25; available at BMT Micro.

Chatter

Chatter is an IRC-style chatting program that connects directly from person to person (host to host) instead of using a server. You chat with one person at a time. You can talk to several people at one time, but in different windows. Chatter runs on platforms supporting Java 1.1.x, such as OS/2, Windows NT, and Unix.

Developer Web site is at www.bergsoe.k-net.dk/~pbk409 /java.html. Registration: \$25, at BMT Micro.

WarpNote

Tired of those yellow sticky notes that won't stick on your monitor? Here's sticky notes that remain where you put them: on your OS/2 desktop. WarpNote gives you easy access to little yellow windows where you can note down everything you want. The program is simple and easy to use and consumes as little memory as possible. It includes:

- O Wordwrapping
- O Titlebar can be hidden

O Enhanced color and font saving O Enhanced access to new notes Registration is \$14; available at BMT Micro.

House/2 home automation

HOUSE/2 is an OS/2 Warp program to control the home automation interface model CM11A made by X10 PowerHouse.

HOUSE/2 is similar to X10's ActiveHome and IBM's HomeDirector program.

With CM11A and X10 modules, you can inexpensively automate your home-from turning on your lights and appliances automatically, to controlling drapes and thermostats, to monitor events from motion sensors and input modules. The CM11A connects to your computer's serial port and acts as a timing device controlling modules. X10 Modules plug into your existing house wiring; all transmissions between modules and the CM11A interface occur through the house wiring itself. No rewiring is necessary. This could be the easiest and most fun home improvement project you will ever undertake.

HOUSE/2 will let you program the CM11A interface, interactively turn modules on/off and monitor X10 events right from your OS/2 desktop. You can use voice commands to turn on your lights and appliances.

HOUSE/2 has the following features:

- O Organize modules and macros into groups of up to twelve modules per group and eight groups per set. Each set can be saved to disk. The number of sets are only limited by disk space.
- O Operate modules and macros directly from your desktop. You can interactively turn on appliances or lights from your computer. If you run OS/2 Warp 4.0 with dictation installed, you can operate your modules with speech commands.
- O Program the CM11A interface by uploading timer information to the interface memory. Timers can be set to operate certain weekdays and dates. Special features like random turn on/off are supported to provide a live-in look.
- Clear interface memory, set interface time and clear battery counter.

One bad software decision can ruin your whole day.

Let's face it . When it comes to choosing the right utility for your OS/2 system, you can't afford to take risks. You need a proven set of disk, file, and desktop utilities which are reliable and effective. One that supports multigigabyte partitions, HPFS and FAT file formats, long file names, with both PM and command line utilities. With qualified product support representatives accessible from the internet, compuserve, phone or fax.

What you need is the SofTouch Suite family of OS/2[®] utilities from SofTouch Systems, Inc. Our disk and file utilities improve system performance with HPFS and FAT defraggers, repair damaged INI files and user desktops, fully uninstall applications, move applications across different partitions and manage hundreds of thousands of files in directories and drives spanning multiple gigabytes of space. Our software repairs damaged partitions, rebuilds corrupted desktops, and recovers critical HPFS data files - everything you need to maintain your custom OS/2 system.

Call SofTouch Systems and ask for the SofTouch Suite. We've been helping users like you since 1991 and OS/2 1.1.

> 800.944.3028 405.947.8085 FAX 405.947.8169 SofTouch Systems, Inc. 1300 South Meridian, Suite 600, Oklahoma City, OK 73108-1751

> > http://www.softouch.com

- O Modules, macros and groups can licensed customers may take advan- and turns to green when there is at be setup without having to connect to the CM11A interface.
- O When connected to the CM11A interface, HOUSE/2 will log all X10 events to a file and do live status update of displayed modules on screen.
- O Using the included HOUSE/2 utility, you can migrate the existing ActiveHome or HomeDirector setup to HOUSE/2 format.

HOUSE/2 is shareware and can be registered through BMT Micro, Compuserve's GO SWREG, or from the author directly.

You can get infomation about HOUSE/2 and download HOUSE2.ZIP from the "Warped Code Cellar" at: http://ourworld .compuserve.com/homepages /aschw

The HOUSE/2 program contains comprehensive information on home automation with a number of references to web sites related to home automation and security.

You can run this program and explore its features without having to own or connect to a CM11A interface.

HOUSE/2 will be available on CompuServe in OS2BVEN, Library 1, Shareware.

Solution Technology upgrades

Solution Technology, developer of TWAIN for OS/2, BarCode Anywhere, Genie Forms Processing, and Image Edition for OS/2, released TWAIN 1.6 compliant upgrades to their TWAIN for OS/2 Consumer Driver Pack, TWAIN for OS/2 ColorWorks Scanner Driver Plug-in, and Applause Image Utility. In addition, "the Applause Image Utility has gone through a significant upgrade," said Leon D. Zetekoff, product manager.

The company's products are currently shipping through STi distributors J3 Computer Technologies (www.os2store.com) and Indelible Blue (www.indelible-blue.com).

STi also has updated their web site (www.gate.net/~stidev) with product upgrade and technical support request forms. Existing

tage of online support mechanisms.

STi is a major manufacturer of production level OS/2 and Windows NT based image, barcode, and forms processing technologies.

File Manager/2 v2.56

FM/2 has been around for quite a while, but were you aware that it had been enhanced this much? If you're FM/2 v2.56 is an OS/2 Warp 32-bit file/directory/disk/archive/etc. maintenance package with plenty of bells and whistles-a Swiss army knife for OS/2. It's the only file management winner of a 1995 OS/2 Magazine Editor's Choice award, and winner of OS/2 e-Zinel's 1996 Readers' Choice Award for "Best Disk/File Utility or Suite."

POP3Spy V1.4

Are you tired of checking your E-Mail every few minutes? Don't want to leave your email client running all the time to keep you informed about incoming mail? The POP3 Spy is a small program which checks your mail every few minutes and informs you in many different ways.

The window interior displays the number of messages on your mail server. The window is red if you don't have messages on your server,

OS/200ns

least one message on your server. It is not necessary to see the entire window; if you can see a small part of it, you see if there is some mail waiting.

The icon changes. When the program is running minimized, you can check the icon on your desktop. The window title also tells you how many messages are waiting. The software can inform you by playing a tune using the system speaker. It can even automatically launch your email client.

You can get the latest release of this software at: www.horgen.net /rem/software/. If you have questions or suggestions, mail to: ralf.christen@ibm.net.

SpeedSoft Sibyl for OS/2 shipping

SpeedSoft Sibyl for OS/2, a visual Delphi-like development tool, is shipping, and available from Indelible Blue in the United States.

For more information on Sibyl see www.ndrh.de/speed. A demo version of Sibyl as well as fixpacks and additionally docs and components can also be obtained there.

by Harry Martin



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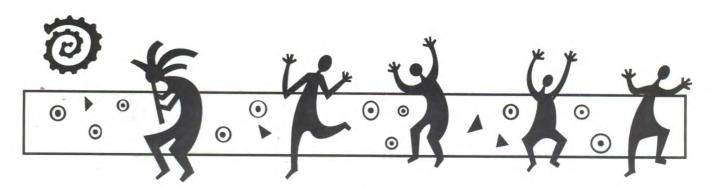
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The Phoenix OS/2 Society, Inc

The Phoenix OS/2 Society is a computer user group dedicated to OS/2. We have been publishing our award-winning magazine, extended attributes since August of 1994, and we have members all over the world.

Yes, this is a user group publication, and that sometimes shows; however, that's also an advantage, since you get real-world feedback about OS/2 and OS/2 products from other users, not just jaded, cynical journalists.

How useful will it be to join the Phoenix OS/2 Society if you aren't in Arizona? We see the Phoenix OS/2 Society as something akin to the National Geographic Society or the Smithsonian; while most members only see a magazine, you're actually a member of a society, and can participate in its activities when you happen to be in the area.

Even without activities that take place in Phoenix, Society membership includes product discounts that alone could make membership worthwhile. Taking advantage of one such discount could easily save you the entire cost of membership, giving you a "free" subscription.

Plus, the Society is prominent in the computing community. We are *already* heard by IBM; they listen to what we say. Several IBM executives get *extended* attributes. They don't get it for the "club news"—they use it to learn what OS/2 users really care about. And they respond to what they read. You're not just getting a magazine. You're getting a voice.

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